FIELD SAMPLING PLAN
FOR THE
MULTI-SERVICE SITE
DAYTON, MONTGOMERY COUNTY, OHIO

Prepared for
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region V

Prepared by
WESTON SOLUTIONS, INC.
Region V Superfund Technical Assessment and Response Team

January 26, 2011

Approved by: _____ Date: _____
Steve Renninger
U.S. EPA Region V
On-Scene Coordinator

Project Dates of Sampling:	January 27, 2011
CERCLA ID / Site Spill Identifier No.:	Not Assigned
Contract Name:	START III
Contract No.:	EP-S5-06-04
Technical Direction Document No.:	S05-0001-1101-003
Document Control No.:	1344-4H-ALIV

ACRONYM LIST

CFR	Code of Federal Regulations
COC	Contaminant of Concern
MS/MSD	Matrix Spike/ Matrix Spike Duplicate
OSC	On-Scene Coordinator
PPE	Personal Protective Equipment
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control
FSP	Field sampling plan
MS	Multi-Service
PID	Photoionization Detector
PPE	Personal Protective Equipment
SOP	Standard Operating Procedure
START	Superfund Technical Assessment and Response Team
TCLP	Toxicity Characteristic Leaching Procedure
U.S. EPA	United States Environmental Protection Agency
VOC	Volatile Organic Compound
WESTON	Weston Solutions, Inc.

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1.0 Introduction

This Field sampling plan (FSP) identifies the data collection activities and associated quality assurance/quality control (QA/QC) measures specific to the Multi-Service (MS) Site (the Site) located in Dayton, Montgomery County, Ohio. All data will be generated in accordance with the quality requirements described in the *START III Generic QAPP*, dated June 2006. The purpose of this FSP is to describe site-specific tasks that will be performed in support of the stated objectives. The FSP will reference the QAPP for generic tasks common to all data collection activities including routine procedures for sampling and analysis, sample documentation, equipment decontamination, sample handling, data management, assessment, and data review. Additional site-specific procedures and/or modifications to procedures described in the *START III Generic QAPP* are described in the following FSP elements.

This FSP is prepared, reviewed, and approved in accordance with the procedures detailed in the *START III Generic QAPP*. Any deviations or modifications to the approved FSP will be documented using **Table 1: FSP Revision Form.**

2.0 Project Management and FSP Distribution and Project Team Member List

Management of the Site will be as documented in the *START III Generic QAPP*. Refer to the *START III Generic QAPP* for an organizational chart, communication pathways, personnel responsibilities and qualifications, and special personnel training requirements.

The following personnel will be involved in planning and/or technical activities performed for this data collection activity. Each will receive a copy of the approved FSP. A copy of the FSP will also be retained in the site file.

Personnel	Title	Organization	Phone Number	Email
Steve Renninger	OSC	U.S. EPA	513-260-7849	renninger.steven@epa.gov
John Sherrard	Project Manager	START	513-703-3092	jsherrard@dynamac.com
Randy Kirkland	Site Sampler	START	937-602-3089	randy.kirkland@westonsolutions.com
Dave Robinson	Health and Safety	START	937-572-3630	david.robinson@westonsolutions.com
Lisa Graczyk	QA Reviewer	START	312-305-6745	lgraczyk@dynamac.com

NOTES:
OSC – On-Scene Coordinator
QA – Quality Assurance
START – Superfund Technical Assessment and Response Team
U.S. EPA – United States Environmental Protection Agency

3.0 Planning and Problem Definition

3.1 Problem Definition

The purpose of this investigation is to collect liquid samples from drums, totes and aboveground storage tanks (AST) at an abandoned former industrial laundry and dry cleaning facility to determine if CERCLA hazards exist to human health and the environment.

3.2 Site History and Background

The Site is located at 1962 Radio Road, Dayton, Montgomery County, Ohio (Figure 3-1). The geographical coordinates for the site are 39° 46' 18.336" North latitude and 84° 7' 45.984" West longitude. The Site is located on 7.121 acres within an industrial park in northeastern Dayton. The Site is a former industrial laundry and dry cleaning facility and is bordered to the north and east by Five Rivers Metro Parks' bike path; to the south by a wooded property; and to the west by an open lot used by a tree service company for wood storage (Figure 3-2). The closest residential homes are located 300 feet to the south and 400 feet to the north.

The facility operated from the mid-1990s to March 2010 and laundered industrial work gloves, rags, ink towels and shop towels. The dry cleaning process used a solvent with a flash of 105 degrees Fahrenheit (°F). The facility used Hoyt Petromizer solvent recovery machines and a carbon absorption unit on the solvent tank ventilation stacks to reduce air emissions of solvent vapors.

The Site includes approximately 50 drums, totes and containers; 7 to 10 ASTs; two sumps/pits and one 27,589 square-foot (SF) building (Figure 3-2). One small structure, located just inside the gate on the west side of the property, is open on the two sides and was used for storage of rags in containers and totes. In addition, there are approximately 10 trucks, 3 trailers and 7 box trucks on site, some of which hold containers of dirty rags.

In 2002 Multi-Service was having ongoing discharge violations to the City of Dayton's sanitary sewer. In 2003, 2004, and 2005, the Southern Ohio Environmental Crimes Task Force covertly sampled Multi-Service's discharge, determining that Multi-Service was discharging flammable liquids to the sewer. The Task Force also uncovered additional hazardous waste violations during the investigation. As a result of the investigation, in August 2006, Multi-Service and Mel Tatman pled guilty to felony and misdemeanor charges related to their discharges to the sewer and transportation of hazardous waste. Multi-Service was fined $20,000 and placed on two years probation. Mel Tatman was sentenced to two years probation with the first six months in home confinement, fined $5,000 and ordered to serve 100 hours of community service.

In May 2009, based on Ohio EPA's Division of Surface Water's concerns regarding waste management at the site, the Division of Hazardous Waste Management (DHWM) conducted a compliance assistance inspection. At the time, Multi-Service was not exceeding the 90-day storage limit for the hazardous waste stored in totes. Subsequent hazardous waste inspections were conducted on June 4 and 15, 2009. From these inspections it was determined that Multi-Service was

exceeding the 90-day storage limit for hazardous waste.

Additional inspections revealed Multi-Service was also exceeding the 90-day storage limit for hazardous waste stored in the 6,000-gallon tank located outside of the facility. The outside tank does not have proper secondary containment. Access is limited to the tank because of the design of the containment wall. Waste in the tank hardens in colder weather making removal difficult. The tank has not been cleaned out since 2008.

Throughout 2009 and 2010, Multi-Service continued to violate the 90-date storage limit for hazardous waste. Ohio EPA DHWM referred Multi-Service for enforcement in October 2009. Ohio EPA Director's Draft Findings and Orders were sent to Multi-Service in February 2010.

During the January 12 and 21, 2010, inspections DHWM observed the same leaking hazardous waste drum. The drum was eventually corrected during the January 27, 2010, inspection. During the April 7, 21, and May 5, 2010, inspections another drum was observed leaking, with no corrective actions taken until the drum was shipped off site on May 28, 2010.

Crown Solutions operated Multi-Service's waste water treatment unit. Crown Solutions met with Mel Tatman on March 5, 2010. During the meeting Mr. Tatman informed Crown Solutions that Multi-Service was filing for bankruptcy. Crown Solutions subsequently contacted DHWM to explain that Crown no longer operated the waste water treatment unit at Multi-Service and was discontinuing its business with Multi-Service. According to Crown, Multi-Service attempted to operate the waste water treatment unit on its own the previous week and had caused a pipe to break spilling waste onto the floor around the equalization tanks. This prompted Crown Solutions on March 9, 2010, to remove equipment from the waste water treatment unit to prevent the unit from being operated. The City of Dayton rescinded Multi-Service's discharge permit on March 15, 2010.

Due to inaction by the facility and rumors of bankruptcy, Ohio EPA referred Multi-Service to the Attorney General's Office for enforcement. On April 16, 2010, the Attorney General's Office met with Multi-Service in an attempt to obtain compliance. During the meeting, Mel Tatman provided financial information for Multi-Service detailing the expenses owed by Multi-Service.

On April 20, 2010, Multi-Service had Mike's Sanitation pump off waste from the waste water treatment unit and associated tanks. On April 22, 2010, Ohio EPA sampled wastes from the equalization tanks (#1 and #2), the chemical mix tank, the floor pit, and the waste water treatment unit. Samples from the equalization tank #2, the chemical mix tank and the floor pit came back as ignitable hazardous waste.

On May 26, 27, and 27, 2010, Clean Harbors transported forty-nine (49) totes and twenty-two (22) drums off-site for disposal. No additional waste has been taken off-site since the May 2010, shipment.

JP Morgan Chase initiated foreclosure against Multi-Service in April 2010, but has yet to finalize the action. In August 2010, Mel Tatman filed personal bankruptcy.

The Ohio EPA accompanied the Dayton Fire Department on an inspection of Multi-Service on November 23, 2010. The Dayton Fire Department was concerned with the storage of flammable materials and no operational fire suppression system. On November 24, 2010, the Dayton Fire Department issued a Notice of Violation to Mel Tatman and Multi-Service ordering the removal of all flammable and combustible materials. On December 14, 2010, the Dayton Fire Department met with Mel Tatman to verify the fire suppression system was properly shut down. The Dayton Fire Department gave Mel Tatman 90 to develop an action plan for the removal of the materials from the site. During the inspection, the Dayton Fire Department observed additional liquid leaking from a tank in the Tank Room.

All utilities have been shut off to the site. A fence extends from the sides of the building in the front, along the property edge on the east and west sides, and ends in the woods to the south of the building. Access is available through the woods. The building has been broken into in the past.

On December 22, 2010, Ohio EPA requested assistance from the United States Environmental Protection Agency (U.S. EPA) to determine if the Site met the criteria for a time-critical removal action.

3.3 Contaminants of Concern/Target Analytes

The contaminants of concern at the site include corrosives and solvents. U.S. EPA has requested the following analytical tests be performed on drum, tote, container and AST samples to be collected from the Site:

- Flash Point
- pH
- Toxicity Characteristic Leaching Procedure (TCLP) volatile organic compounds (VOCs)
- Total VOCs

4.0 Project Description and Schedule

U.S. EPA has scheduled a site assessment at the Site on January 27, 2011. U.S. EPA has requested that the Weston Solutions, Inc. (WESTON®) Superfund Technical Assessment and Response Team (START) collect drum, tote, container and AST samples which have the highest probability of having elevated VOC concentrations, low pH and/or a low flash point.

Liquid or solid samples which potentially meet any of those hazardous criteria will be analyzed for a combination of the following analyses: 1) Flash Point; 2) pH; 3) TCLP VOCs; and/or 4) Total VOCs.

All samples will be sent to a WESTON START-procured commercial laboratory.

5.0 Project Quality Objectives

5.1 Project Objectives

Sufficient data will be obtained from a representative number of samples to support defensible decisions by the EPA and to determine whether further actions at the site are necessary.

The following is a list of project objectives that may apply to the site investigation:

- To determine whether a removal action is warranted and if so whether the response should be classified as an emergency, time-critical, or non-time critical removal action.

- To rapidly assess and evaluate the urgency, magnitude, extent and impact of a release, or threatened release, of hazardous substances, pollutants or contaminants, and their impact on human health and/or the environment.

- To determine a remedy to eliminate, reduce, or control risks to human health and the environment and to support an "Action" decision memorandum documenting the identified removal approach.

More information about the sampling procedures to support this is provided in Section 6.

5.2 Measurement and Performance Criteria

Generic measurement and performance criteria described in the *START III Generic QAPP* will be used. These criteria will ensure that data are sufficiently sensitive, precise, accurate, and representative to support site decisions.

5.3 Data Quality Objectives

Data quality objectives address requirements that include when, where, and how to collect samples; the number of samples; and the limits on tolerable error rates. These steps should periodically be revisited as new information about a problem is learned. Sections 4 and 6 of this FSP address these objectives.

In addition, data quality objectives address the analytical screening levels to be used to make decisions. The following describes the comparison values that will be used for each analytical parameter:

- Flash Point – ignitability characteristic in 40 Code of Federal Regulations (CFR) 261.21. A liquid waste is characterized as an ignitable waste if it shows a flash point of less than 140 °F.

- pH – corrosivity characteristic in 40 CFR 261.22. A solid or liquid waste is characterized as a corrosive waste if it is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5

- TCLP VOCs – toxicity characteristic in 40 CFR 261.24. A solid or liquid waste is characterized as a toxic waste if the TCLP concentration exceeds its respective regulatory level.

6.0 Sampling Design

The site assessment will consist of WESTON START using a photoionization detector (PID) to analyze the VOC levels within the headspace of the on-site drums, totes, containers and ASTs. Drums, totes, containers and ASTs having VOC headspace concentrations greater than 100 parts per million (ppm) will have its respective contents sampled. The sample will be submitted for a combination of flash point, TCLP VOC and Total VOC analyses. WESTON START estimates 10 to 15 containers will be collected and analyzed for flash point analysis and 5 to 10 containers will be collected and analyzed for TCLP and Total VOC analyses.

In addition, WESTON START will sample containers having a "Corrosive" label and/or been field tested (with pH paper) to show a pH less than or equal to 2 or greater than or equal to 12 standard units.

A description of the waste sampling, sample numbering system, and management of investigation-derived waste is described below.

6.1 Waste Sampling

Drum, tote, container and AST samples will be collected using one of the following methods:

- plastic drum thieves,
- plastic bailer,
- a plastic scoop,
- a sample jar or plastic scoop attached to the end of a polyvinyl chloride (PVC) pipe, or
- the sample may be poured into the sample jar if a container has a volume of 5 gallons or less.

The container headspace will be field screened prior to collecting a sample using a MultiRAE Plus PID to determine if VOCs are present, which may indicate that the liquid waste is flammable. The container may also be field screened with pH paper to determine if the liquid sample has corrosive characteristics.

6.2 Sample Numbering System

All samples for analysis, including QC samples, will be given a unique sample number. The sample numbers will be recorded in the field logbook and on the chain-of-custody paperwork.

WESTON START will assign the composite liquid sample a unique number. The sample number highlights the suspected contaminated area and location, and will be used for documentation purposes in field logbooks, as well as for presentation of the analytical data in memoranda and reports. The project drum samples will be identified using the following format:

MS-1, MS-2, MS-3, and so on.

6.3 Management of Investigation-Derived Wastes

For purposes of this FSP, investigation-derived wastes are defined as any byproduct of the field activities that is suspected or known to be contaminated with hazardous substances. The performance of field activities will produce waste products, such as spent sampling supplies (*e.g.*, tubing, foil pans, etc.), and expendable Personal Protective Equipment (PPE).

All investigation-derived wastes will be double-bagged and left in the on-site building.

Investigation-derived wastes will generally consist of disposable nitrile gloves, latex boot covers, and Tyvek or Saranex suits. These items are used primarily for prevention of cross-contamination and for sanitary considerations during sampling activities.

7.0 Sampling Procedures

7.1 Sampling Standard Operating Procedures

The following Standard Operating Procedures (SOPs) will be used during the site evaluation:

- Weston SOP 404 - Drum Sampling

7.2 Decontamination Procedures

General decontamination procedures are described in Section B.2 of the *START III Generic QAPP*.

Personal decontamination will consist of dry decontamination methods. Hand sanitizer will be available when PPE is doffed. All sampling equipment will be dedicated, thus no sampling equipment decontamination will be required.

8.0 Sample Handling, Tracking, and Custody Procedures

All samples will be identified, handled, shipped, tracked, and maintained under chain of custody, in accordance with the *START III Generic QAPP*.

9.0 Field Analytical Methods and Procedures

9.1 Field Analytical Methods and Standard Operating Procedures

There are no field analytical methods or SOPs associates with this sampling event.

9.2 Field Testing Laboratory

There will not be a field testing laboratory for this project.

9.3 Screening/Confirmatory Analyses

WESTON START will use a MultiRAE Plus PID to screen the headspace of drums to determine if it contains elevated VOCs. WESTON START may also utilize pH paper to identify liquid waste with low (less than 2) or high (greater than 12) pH units for sampling.

10.0 Fixed Laboratory Analytical Methods and Procedures

The following commercial laboratory will be utilized for sample analyses.

ALS Laboratoryt
4388 Glendale Milford Road
Cincinnati, OH 45242
(513) 733-5336 office
(513) 733-5347 fax
Main Contact: Ed Slick

11.0 Quality Control Activities

11.1 Field Quality Control

The number of QC samples collected for each analytical parameter and concentration level are listed in **Table 2: Sampling and Analysis Summary.** The QC sample determination and frequency is in accordance with the *START III Generic QAPP*, Table 4.

11.2 Analytical Quality Control

QC for analytical procedures will be performed at the frequency described in the *START III Generic QAPP*, Tables 5 and 6. In addition, method-specific QC requirements will be used to ensure data quality

11.3 Performance Evaluation Samples

There will not be Performance Evaluation samples analyzed for this project.

12.0 Documentation, Records, and Data Management

Documentation, record keeping, and data management activities will be conducted in accordance with the *START III Generic QAPP*, Section B.10.

13.0 Quality Assurance Assessment and Corrective Actions

No field audits will be conducted due to the short-term (two day) duration of the sampling event.

14.0 Reports to Management

Reports to management will be written and distributed in accordance with the *START III Generic QAPP*, Section C.

15.0 Steps 1, 2 and 3: Data Review Requirements and Procedures

Step 1: Data collection activities, including sample collection and data generation, will be verified in accordance with the *START III Generic QAPP*, Section D.

Step 2: Data will be validated by WESTON START.

Step 3: Data will be reviewed for usability in accordance with the *START III Generic QAPP*, Section D.

TABLES

Table 1
FSP Revision Form

Site: Multi-Service Site, Dayton, Montgomery County, Ohio
OSC: Steve Renninger
TDD: S05-0001-1101-003

Date	Revision Number	Proposed Change to FSP/QAPP	Reason for Change of Scope/Procedures	FSP Section Superseded	Requested By	Approved By

Table 2
Sampling and Analysis Summary

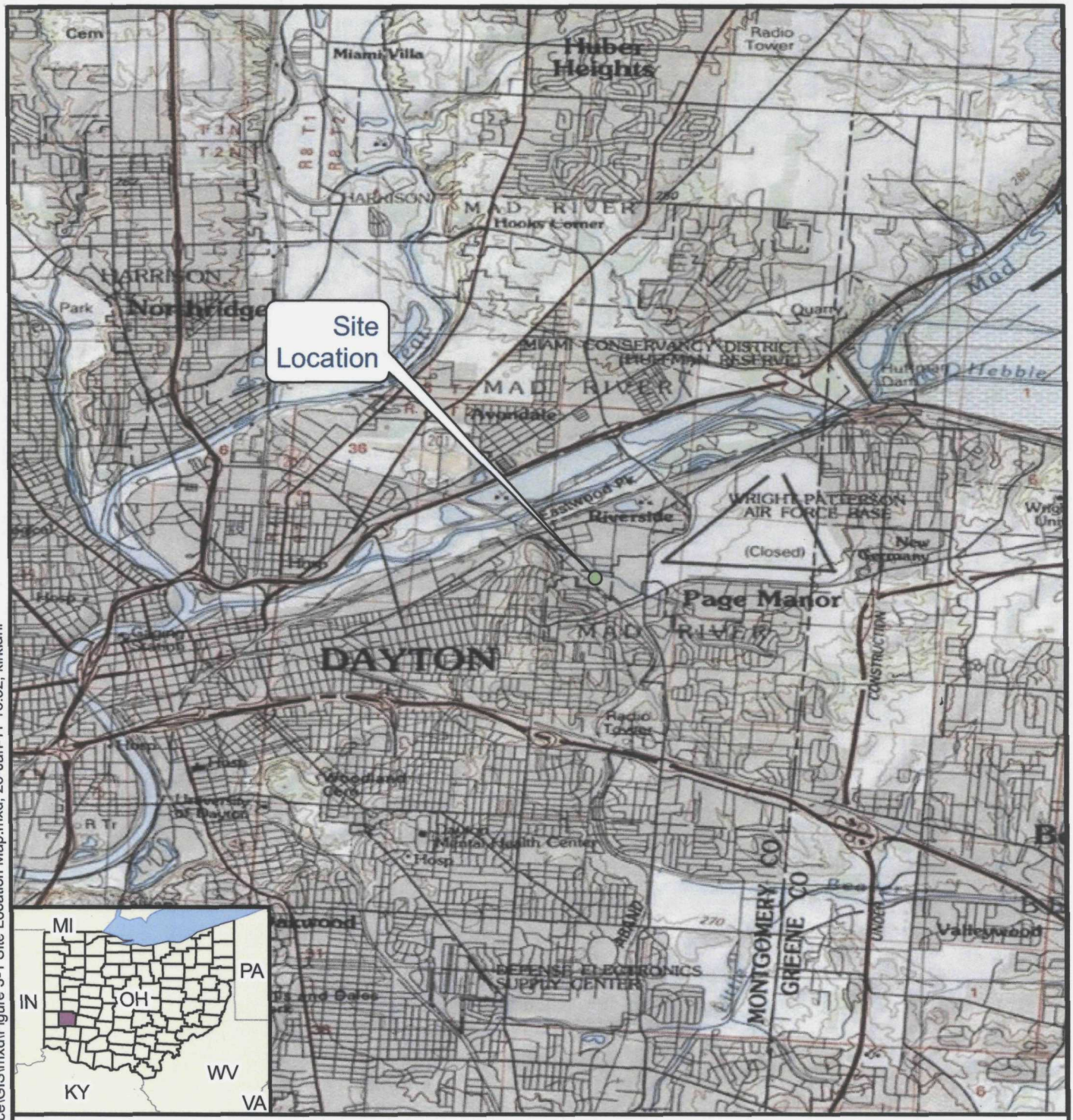
Site: Multi-Service Site, Dayton, Montgomery County, Ohio
OSC: Steve Renninger
TDD: S05-0001-1101-003

Matrix	Analytical Parameter	Analytical Method	Containers (Numbers, Size, and Type)	Preservation Requirements	Number of Sampling Locations	Number of Field Duplicates	Number of MS/ MSDs[2]	Number of Blanks (Trip, Field, Equip. Rinsate)[1]	Total Number of Samples to Lab[3]	Holding Time
Liquid/Solid	TCLP VOCs	1311/8260B	4-ounce jar	Ice	5-10	0	0	0	5-10	7 days to extraction, 40 days for analysis
Liquid	Total VOCs		4-ounce jar (separate 4-oz jar required if TCLP VOC analysis is also requested from the same sample container)	Ice	5-10	0	0	0	5-10	
Liquid	Flash Point	1010/1020	4-oz glass jar	Ice	10-15	0	0	0	10-15	14 days
Liquid/Solid	pH	9045D	4-oz plastic container	Ice	5-10	0	0	0	5-10	As soon as possible

Notes:
[1] Trip blanks are only required for VOCs in water samples.
[2] For the samples designated for MS/MSDs, triple volume is required for VOCs and double volume for other water parameters.
[3] Total number of samples to the laboratory does not include MS/MSD samples.

Equip. – Equipment
MS/MSD – Matrix Spike/Matrix Spike Duplicate
VOC – Volatile Organic Compound
TCLP – Toxicity Characteristic Leaching Procedure

FIGURES



File: C:\START Project Files\Multi-Service\GIS\mxd\Figure 3-1 Site Location Map.mxd, 26-Jan-11 16:52, kirklanr

Image Source:
National Geographic Society

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Prepared for:
U.S. EPA Region 5
Contract No: EP-S5-06-04
TDD No.: S05-0001-1101-003
DCN: 1344-4H-ALIV

Weston Solutions, Inc.
4710-A Interstate Drive
Cincinnati, OH 45246

Figure 3-1
Site Location Map
Multi-Service Site
Dayton, Montgomery County, Ohio

File: C:\START Project Files\Multi-Service\GIS\mxd\Figure 3-2 Site Location Map.mxd, 26-Jan-11 16:45, kirklanr

Legend

Site Boundary

0 50 100 Feet

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DCN: 1344-4H-ALIV

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4710-A Interstate Drive
Cincinnati, OH 45246

Figure 3-2
Site Layout Map
Multi-Service Site
Dayton, Montgomery County, Ohio